

# Introduction

---

Numbers are scary. They have a mystifying language of their own—*binomial*, *exponent*, *logarithm*, *quotient*—and they tend to confound us as they get larger and larger. *What is the negative square root of 16? What is the highest prime number greater than 900 and less than 1,000?* If you stopped taking math in high school, you might find such questions bewildering.

Yet not all numbers require the expertise of a mathematician or the specialized skills of an accountant, a statistician, or an economist. Simple arithmetic and a basic knowledge of algebra can lead to many useful discoveries. Particularly for lawyers, who spend more time mastering the peculiarities of language than of numbers, a trip down mathematical memory lane may provide some wonderful insights and helpful techniques for practicing law.

This book addresses basic rules and strategies--including calculating interest, measuring probability, the key rates of return and financial ratios--and introduces the most fundamental formulas, then applies those formulas to practice specialties: personal injury and wrongful death, business cases, employment law, real estate, environmental law, bankruptcy, intellectual property and family law.

The book is divided into 20 chapters. The first ten chapters address the basic rules and strategies and introduce the most fundamental formulas. Important threshold concepts, like calculating interest and measuring probability, are discussed, and the key rates of return and financial ratios are outlined. The last ten chapters of the book introduce and apply various formulas to the major practice specialties: personal injury and wrongful death, business cases, employment law, real estate, environmental law, bankruptcy, intellectual property, family law, and admiralty and aviation law. The last chapter provides a detailed examination of the retention of forensic experts and the top rules for using them strategically.

No attempt is made here to provide the level of technical training or the depth of analysis that would accompany the teaching of such formulas in a graduate business or accounting program. Rather, the book is meant for practicing attorneys who want to understand how a formula works, what it does, and how it can assist them to address, resolve, or value a case. While it can be read cover to cover, the book can also be consulted frequently as a reference source for busy practitioners: *What was that formula for calculating lost fringe benefits?* (See Chapter 11). *How much money should we offer today to avoid a long-term alimony obligation?* (See Chapter 18).

Achieving mathematical literacy is an admirable goal unto itself. This book does not promise such results. Still, if the use of well-recognized formulas serves to professionalize the practice of law, to bolster the quality of advice provided to our clients, and to generate a more responsibly and skillfully presented case for damages, then we will have advanced the legal profession in a meaningful way while cross-fertilizing the fields of law, accounting, economics, and statistics.

Mark S. Guralnick